

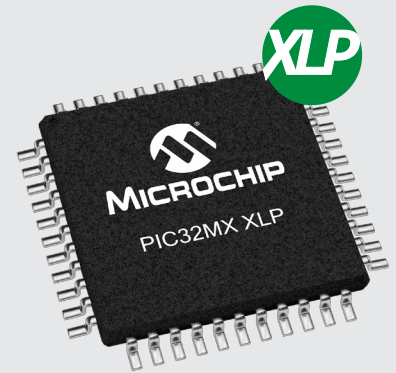
The Feature-Packed PIC32MX1/2/5 Value Family

Offers Large, Scalable Memory Options and Smart Peripheral Mix for Innovative Solutions in Consumer, Industrial, Medical and General Purpose Embedded Control

Summary

The PIC32MX1/2/5 MCU series offers a rich peripheral set at a low cost for a wide range of embedded designs that require complex code and higher feature integration.

The series delivers up to 72 MHz/116 DMIPS performance and provides up to 512/64 KB Flash/RAM options. The family boasts a wide variety of rich features including SPI/I²S™, eXtreme Low Power (XLP) modes with deep sleep currents down to 0.67µA, an enhanced Parallel Master Port (PMP), Controller Area Network (CAN) 2.0B with DeviceNet™ addressing support, a 10-bit, 1 Msps, 48-channel Analog-to-Digital Converter (ADC) and a full-speed USB 2.0 device/host/OTG module. To maximize data throughput, each MCU includes four general purpose Direct Memory Access (DMA) controllers and two dedicated DMA controllers on each CAN and USB module.



Key Features

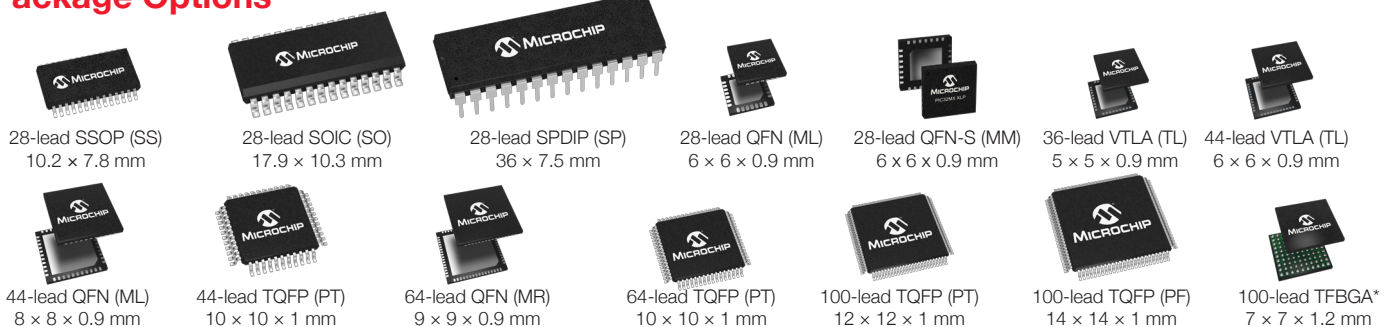
- MIPS32 M4K Core with up to 72 MHz/116 DMIPS
- Up to four SPI/I²S interfaces for audio processing and playback
- eXtreme Low Power (XLP) sleep and deep sleep options
- USB device/host/OTG
- CAN 2.0B with 1 Mbps bit rates for industrial/automotive applications
- Enhanced PMP for graphics or external memory
- Up to five UARTs, three analog comparators and two I²C buses
- 10-bit, 1 Msps, up to 48-channel ADC
- Peripheral Pin Select (PPS) allows function remapping
- Temperature range: -40°C to 105°C

Applications

- Bluetooth® speakers and accessories
- Music-player docks
- Noise-cancelling headsets
- Clock radios
- Battery-powered portable devices
- Entertainment system sound bars
- Automotive tachometers/trip computers
- Vehicle security/tracking/remote access
- CAN to USB bridges
- Touch screen graphics displays
- USB device/host/OTG applications
- General purpose embedded control
- Smart sensors

The PIC32MX1/2/5 devices are compatible with Microchip's 16-bit PIC24F product line for easy migration and are supported by MPLAB® X IDE—the single development environment for all of Microchip's 8-, 16- and 32-bit MCUs.

Package Options



*Please contact your local Microchip sales office for information regarding the availability of devices in the 100-lead TFBGA package.

Development Tools Support

Microchip offers a variety of development tools that will shorten your development time and allow you to easily add features such as Bluetooth audio, Bluetooth Low Energy, CAN 2.0B, touch sensing, graphics and USB device/host/OTG capabilities to your embedded designs.

PIC32MX1/2/5 Starter Kit (DM320100)



This kit provides you with an easy and cost-effective option to experience the USB and CAN functionality of the PIC32MX1/2/5 family of microcontrollers. It features a 50 MHz/83 DMIPS PIC32MX-570F512L MCU with 512 KB Flash, 64 KB RAM, USB device/host/OTG, CAN 2.0B, 48-channel ADC, analog comparators, I²S/SPI ports and UARTs. It also comes equipped with an on-board DB9 connector to interface with the CAN 2.0B-based applications.

PIC32 Bluetooth Starter Kit (DM320018)



This kit is a low-cost Bluetooth development platform featuring the PIC32MX270F256D MCU. This kit features an HCI-based Bluetooth radio, pushbuttons, Cree high-output multi-color LED, standard single-color LEDs, accelerometer, temperature sensors and GPIO for rapid development of Bluetooth Serial Port Profile (SPP), general purpose and USB applications.

Microstick II (DM330013-2)



A low-cost and easy-to-use development platform that is about the size of a stick of gum, the Microstick II is used for evaluating PIC32MX1/MX2 and other 16-bit devices.

PIC32MX XLP Starter Kit (DM320105)



The PIC32MX XLP Starter Kit is a fully integrated 32-bit development platform featuring the high performance and low power PIC32MX274 MCU at 72 MHz with 256 KB Flash, 64 KB of RAM and Full-Speed USB.

The starter kit supports Bluetooth Low Energy connectivity, a 9-axis accelerometer, light sensor and barometric sensor enabling various IoT and low power applications. Additionally the board provides one mikroBUS™ expansion socket from MikroElektronika and a Microchip X32 header to enable accelerated application prototype development.

Bluetooth Audio, USB, CAN, XLP and General-Purpose Plug-In Modules (PIMs)

- PIC32MX270F512L 100-pin PIM for Bluetooth Audio Development Kit (MA320017)
- PIC32MX570F512L 100-pin USB/CAN PIM for the Explorer 16 Development Board (MA320015)
- PIC32MX270F256D 44-pin PIM for Bluetooth Audio Development Kit (MA320013)
- PIC32MX270F256D 44-pin PIM for Explorer 16 Development Board (MA320014)
- PIC32MX XLP PIM for Explorer 16 Development Board (MA320021)
- PIC32MX XLP PIM for Bluetooth Audio Development Kit (MA320022)

Featured PIC32MX1/2/5 Devices*

Device	Flash (KB) + Boot Flash (KB)	SRAM (KB)	Pin Count	Speed Options (MHz)	I ² S™/SPI	I ² C™	UARTs	DMA Channels General/Dedicated	PPS	USB	CAN 2.0B	IC/OC/PWM	10-bit, 1 Msps ADC (Channels)	Analog Comparator	Timers 16/32-bit	RTCC	Parallel Master Port	Temperature Range	XLP (Sleep/Deep Sleep)
PIC32MX110F016B	16 + 3	4	28	40	2	2	2	4/0	✓	-	-	5/5/5	10	3	5/2	✓	✓	-40 to 105°C, -40 to 85°C	No
PIC32MX170F512L	512 + 3	64	100	40/50	4	2	5	4/0	✓	-	-	5/5/5	48	3	5/2	✓	✓	-40 to 105°C, -40 to 85°C	No
PIC32MX230F064B	64 + 3	16	28	40	2	2	2	4/2	✓	FS Device/Host/OTG	-	5/5/5	9	3	5/2	✓	✓	-40 to 105°C, -40 to 85°C	No
PIC32MX230F128L	128 + 3	16	100	40/50	4	2	5	4/2	✓	FS Device/Host/OTG	-	5/5/5	48	3	5/2	✓	✓	-40 to 105°C, -40 to 85°C	No
PIC32MX530F128H	128 + 3	16	64		3		4						28						
PIC32MX550F256L	256 + 3	32	100	40/50	4	2	5	4/4	✓	FS Device/Host/OTG	✓	5/5/5	48	3	5/2	✓	✓	-40 to 105°C, -40 to 85°C	No
PIC32MX570F512H	512 + 3	64	64		3		4						28						
PIC32MX154F128B			28										10						
PIC32MX254F128D	128 + 12	32	44	72	2	2	2	4/2	✓	FS Device/Host/OTG	-	5/5/5	13	3	5/2	✓	✓	-40 to 105°C, -40 to 85°C	Yes
PIC32MX174F256B			28	72									10						
PIC32MX274F256D	256 + 12	64	44	72	2	2	2	4/2	✓	FS Device/Host/OTG	-	5/5/5	13	3	5/2	✓	✓	-40 to 105°C, -40 to 85°C	Yes

*For a complete list of PIC32MX1/2/5 devices, please visit www.microchip.com/pic32. Note: XLP option is available on select PIC32MX1 & PIC32MX2 devices only

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